

(Boston)

The Quantum View of the World Transcripts
~~of the Book on Physics~~

- 1.) Singlet spin state for two spin- $\frac{1}{2}$ particles
- 12.) The EPR Argument
- 1a.) 3 measurements not in an experiment
2. What does measurement do?
- 2a.) How is this change brought about?
- 2b.) Locality in the EPR argument / LO₁, LO₂
- 2c.) EPR Argument (1935)
- 2d.) LO₃
- 3.) The Bell Argument
- 3a.) The Bell Experiment
- 3b.) The Bell Inequality (statement)
- [4.] The Bell Inequality (proof)
- [5.] $C_{QM}(a, b)$, $C_{classical}(a, b)$
- [6.] Violation of Bell Inequality by QM
- [6a.] The 4 Correlation Coefficients
- 6b.) Aspect's Experiment
- 6c.) The optical setup
- 6d.) The structure of Aspect's Experiment
- 7.) The Sharp - Standard Approach - LOC₄
- 8.) PLED (statement)
- 9.) Problem with PLED in an independent situation

- [10) Truth conditions for $\phi \vdash \rightarrow \psi$]
- 11) Locality
- 11a) Is Locality violated in EPR?
- 12) Conflict with SR of violating LOC_{1/3}
- 13) Kochen-Specker Result (+ FVNC)
~~(+ VR and FVNC)~~
- 13a) FVNC contd and Desynchronization
FVNC*
- 14) Definition of $\{A\}_{\{B\}}^{\phi}$ and $\{A\}_{\{B\}}^{\phi}(c)$

$\{A\}_{\{B\}}^{\phi}$ ontological content
 $\{A\}_{\{B\}}^{\phi}(c)$ epistemic content
- [14a) Definition of $\{Q \& I\}_{\{A, B\}}^{\phi}(P, E)$

$\{Q \& I\}_{\{A, B\}}^{\phi}$ 14b) OLOC in words
 $\{Q \& I\}_{\{A, B\}}^{\phi}(P, E)$ 14c) ELOC in words
- [15) OLOC and ELOC in symbols]
- 16) Bellard-Heywood result.

$(FVNC + VR + FVNC + OLOC \rightarrow \text{Conclusion})$
 Defn of VR.
- [17) CVA]
- [18) CVA for separated systems]
- [19) Incompatibility of CVA and Locality]
- [19a) Proof Contd. - FVNC**]
- 20) Interaction of Physics and Philosophy
- (0) Global Book or Region